DOCUMENT RESUME

ED 429 480 HE 031 855

AUTHOR MacFarland, Thomas W.

TITLE A Comparison of Final Grades Awarded in Campus-Based Courses and Courses Offered through Distance Education for Winter Term 1997.

INSTITUTION Nova Southeastern Univ., Ft. Lauderdale, FL. Research and Planning.

REPORT NO R98-10

PUB DATE 1998-09-00

NOTE 26p.

PUB TYPE Reports - Research (143)

EDRS PRICE MF01/PC02 Plus Postage.

DESCRIPTORS *Academic Achievement; Business Education; College Faculty; College Instruction; *College Students; *Distance Education; Extension Education; *Grades (Scholastic); Graduate Study; Higher Education; Psychological Studies; Psychology; Teacher Education; Undergraduate Study; Universities

IDENTIFIERS *Nova Southeastern University FL

ABSTRACT

This study examined differences in final course grades for campus-based and distance education students at Nova Southeastern University (Florida). Data on over 26,000 course grades for winter term 1997 were obtained from university records. It was found that students enrolled in courses offered through distance education received a significantly greater frequency of successful grades (A, B, C, or Pass) than their campus-based counterparts in the undergraduate studies program, the School of Education and Human Services, and the School of Business and Entrepreneurship. However, in the Center for Psychological Studies, there was no significant difference in the frequency of successful grades awarded in campus-based courses and courses offered through distance education. An appendix provides two sets of data tables. (MDM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

A COMPARISON OF FINAL GRADES AWARDED IN CAMPUS-BASED COURSES AND COURSES OFFERED THROUGH DISTANCE EDUCATION FOR WINTER TERM 1997

ED 429 480

Thomas W. MacFarland

Senior Research Associate

Nova Southeastern University
Research and Planning

Report 98-10

September 1998

BEST COPY AVAILABLE

EXECUTIVE SUMMARY

The Office of Research and Planning provided the first comprehensive analysis of grades at Nova Southeastern University in 1996. Because of the way data were organized, it was not possible at that time to report grades based on place of class instruction (on-campus and off-campus).

The purpose of this report is to build on the prior study and to report on grades by place of class instruction for the four academic centers with off-campus instruction: Farquhar Center for Undergraduate Studies, Fischler Center for the Advancement of Education, School of Business and Entrepreneurship, and Center for Psychological Studies. This report is restricted in focus to all standard courses offered in these four centers during Winter Term 1997:

- By focusing on grades awarded only in standard courses, grades in non-standard courses (practicum, thesis, dissertation, Major Applied Research Project, rotation, etc.) have been excluded from this report.
- Following along with guidelines established by the Southern Association of Colleges and Schools:
  - All instruction offered in either Broward County or Miami-Dade County was considered campus-based instruction.
  - All instruction offered at other locations was considered instruction offered through the use of distance education.
- Regarding the degree to which these centers offered instruction in standard courses at off-campus sites during Winter Term 1997:
  - In the Farquhar Center for Undergraduate Studies, 67.7 percent of all grades were awarded in campus-based classes and the remaining 32.3 percent represented grades awarded in courses offered through distance education.
  - In the Fischler Center for the Advancement of Education, 68.1 percent of all grades were awarded in campus-based classes and the remaining 31.9 percent represented grades awarded in courses offered through distance education.
  - In the School of Business and Entrepreneurship, 54.3 percent of all grades were awarded in campus-based classes and the remaining 45.7

percent represented grades awarded in courses offered through distance education.

- In the Center for Psychological Studies, 75.7 percent of all grades were awarded in campus-based classes and the remaining 24.3 percent represented grades awarded in courses offered through distance education.

Overall, it was determined that there was a statistically significantly greater frequency of successful grades awarded in courses offered through distance education compared to the frequency of successful grades awarded in campus-based courses. This finding was upheld in the Farquhar Center for Undergraduate Studies, the Fischler Center for the Advancement of Education, and the School of Business and Entrepreneurship. However, in the Center for Psychological Studies, there was no statistically significant difference in the frequency of successful grades awarded in campus-based courses and courses offered through distance education.

Although there is a minimal degree of literature devoted to this topic, the general finding was that distance education students tend to receive better grades than their campus-based counterparts. However, far more research is needed before this finding could be accepted at any broad level since some studies clearly indicate age and motivation differences between the two groups, with distance education students often characterized as highly motivated adult learners.

To develop a better understanding of learning outcomes comparing campus-based students and distance education students, this study offered the recommendation that the University should provide some type of standardized assessment in selected courses that are offered in both formats. Then, it would be possible to empirically determine achievement of campus-based students and distance education students on an equivalent examination or other common assessment instrument.

TABLE OF CONTENTS

	Page
EXECUTIVE SUMMARY	ii
LIST OF TABLES	v
BACKGROUND	1
METHODOLOGY	2
RESULTS	3
SUMMARY	3
REFERENCES	5
APPENDIX: Tables 1 to 2.E	6

LIST OF TABLES

Table		Page
1	Summary of Successful Grades (A, B, C, Pass) and All Other Grades by Place of Class Location and by Academic Center: Winter Term 1997	7
2.A	Summary of Winter Term 1997 Grades by Place of Class Location: Farquhar Center for Undergraduate Studies	9
2.B	Summary of Winter Term 1997 Grades by Place of Class Location: Fischler Center for the Advancement of Education	10
2.C	Summary of Winter Term 1997 Grades by Place of Class Location: School of Business and Entrepreneurship	11
2.D	Summary of Winter Term 1997 Grades by Place of Class Location: Center for Psychological Studies	12
2.E	Summary of Winter Term 1997 Grades by Place of Class Location: All Academic Centers Using Distance Education Modalities	13

BACKGROUND

The Office of Research and Planning provided the first comprehensive analysis of grades at Nova Southeastern University in 1996 (*Grades at Nova Southeastern University: Fall Term 1993, Fall Term 1994, and Fall Term 1995*; 1996). A limitation of that report was that grades could only be reported by academic center and not by place of class instruction (on-campus and off-campus).

The purpose of this report is to expand on the prior presentation and to report on grades by place of class instruction for the four academic centers with off-campus instruction: Farquhar Center for Undergraduate Studies, Fischler Center for the Advancement of Education, School of Business and Entrepreneurship, and the Center for Psychological Studies. This report is restricted in focus to all standard courses offered at the University during Winter Term 1997:

- By focusing on grades awarded only in standard courses, grades in non-standard courses (practicum, thesis, dissertation, Major Applied Research Project, rotation, etc.) have been excluded from this report.
- Following along with guidelines established by the Southern Association of Colleges and Schools:
  - All instruction offered in either Broward County or Miami-Dade County was considered campus-based instruction.
  - All instruction offered at other locations was considered instruction offered through the use of distance education.
- Regarding the degree to which these centers offered instruction in standard courses at off-campus sites during Winter Term 1997:
  - In the Farquhar Center for Undergraduate Studies, 67.7 percent of all grades were awarded in campus-based classes and the remaining 32.3 percent represented grades awarded in courses offered through distance education.
  - In the Fischler Center for the Advancement of Education, 68.1 percent of all grades were awarded in campus-based classes and the remaining 31.9 percent represented grades awarded in courses offered through distance education.
  - In the School of Business and Entrepreneurship, 54.3 percent of all grades were awarded in campus-based classes and the remaining 45.7

percent represented grades awarded in courses offered through distance education.

- In the Center for Psychological Studies, 75.7 percent of all grades were awarded in campus-based classes and the remaining 24.3 percent represented grades awarded in courses offered through distance education.

METHODOLOGY

The methodology used for *Grades at Nova Southeastern University: Fall Term 1993, Fall Term 1994, and Fall Term 1995* (1996) was quite useful and this report in many ways replicates that prior study:

1. The computing center provided the original extract file on November 11, 1997.

   This date provided an approximate four month interim from the end of Winter Term 1997 and the creation of the extract file, allowing sufficient time for adjustment to most *Incomplete* grades and the posting of any late grades.

2. The extract file was purposely prepared so that the five column cluster code for each course was identified, allowing for later discrimination between campus-based instruction and instruction offered at distance education sites.

3. Center catalogs were used for information on standard courses and non-standard courses.

4. The graduate assistant assigned to Research and Planning hand-entered the appropriate *Course_Type* code for each of the more than 9,000 unique course listings identified in the extract file.

5. Grades in non-standard courses (practicum, thesis, dissertation, Major Applied Research Project, rotation, etc.) have been excluded from this report.

Grades were organized for the four academic centers with off-campus instruction into two separate categories:

- Successful grades (A, B, C, and Pass)
- All other grades

The chi-square test was then used to determine if there were differences in the frequency of successful grades awarded in campus-based courses and courses offered through distance education.

RESULTS

A summary of successful grades and all other grades by place of class location for the four academic centers with off-campus instruction is provided in Table 1. Overall, it was determined that there was a statistically significantly greater frequency of successful grades awarded in courses offered through distance education compared to the frequency of successful grades awarded in campus-based courses (Tables 2.A to 2.E).

This finding was upheld in the Farquhar Center for Undergraduate Studies, the Fischler Center for the Advancement of Education, and the School of Business and Entrepreneurship. However, in the Center for Psychological Studies, there was no statistically significantly difference in the frequency of successful grades awarded in campus-based courses and courses offered through distance education.

SUMMARY

For as much interest as the higher education community is currently devoting to distance education, an examination of differences in learning outcomes between campus-based students and their distance education counterparts has received only minimal attention in the available literature. Although there is a limited amount of literature devoted to this topic, the general finding of the available studies was that distance education students tend to receive better grades than their campus-based counterparts:

- Focusing on one specific course in the University's Graduate Teacher Education Program, it was previously determined that off-campus students had higher scores on a common final examination than their campus-based counterparts (*A Comparison Between On-Campus Students and Off-Campus Students to a Common Final Examination*, 1996).

- Hammond (1997) examined final course grades in a course that was both classroom-based and televised into the homes of distance education students and determined that distance education students had nearly twice as many final "A" grades in the course as their classroom-based counterparts.

- Hogan (1997) compared the success rate of students enrolled in distance education courses to the success rate of students enrolled in traditional courses

and found that distance education students had higher grades than the grades of students enrolled in traditional courses.

- Smith and McNelis (1993) presented a study where it was found that off-campus students had higher final grade scores than the scores of a campus-based control group.

- Verbrugge (1997) examined the results of a trial course in Management Information Systems taught in a traditional manner to campus-based students and also taught to distance education students through use of the Internet. In this case study, distance education students had higher marks than regular students, although it was cautioned that there were noticeable age difference between the two groups with older students dominating the distance education cohort.

Although the literature tends to currently focus on these singular case studies that have known inherent limitations in terms of methodology, control, and measurement, the general trend in the literature is that distance education students are by no means less successful than campus-based students. As such, it should not be overly surprising that during Winter Term 1997 there was a statistically significantly greater frequency of successful grades awarded in courses offered through distance education as compared to the frequency of successful grades awarded in campus-based courses.

To develop a better understanding of learning outcomes comparing campus-based students and distance education students, it may be useful for the University to provide some type of standardized assessment in selected courses that are offered in both formats. Then, it would be possible to empirically determine achievement of campus-based students and distance education students on an equivalent examination or other common assessment instrument.

REFERENCES

A Comparison Between On-Campus Students and Off-Campus Students to a Common Final Examination. (1996). Fort Lauderdale, Florida: Nova Southeastern University. Research and Planning Report 96-17.

Grades at Nova Southeastern University: Fall Term 1993, Fall Term 1994, and Fall Term 1995. (1996). Fort Lauderdale, Florida: Nova Southeastern University. Research and Planning Report 96-19.

Hammond, Ron J. (1997). *A Comparison of the Learning Experience of Telecourse Students in Community and Day Sections*. ERIC ED 410992.

Hogan, Robert. (1997). *Analysis of Student Success in Distance Learning Courses Compared to Traditional Courses*. ERIC ED 412992.

Smith, Dennie L., and Mary J. McNelis. (1993). *Distance Education: Graduate Student Attitudes and Academic Performance*. ERIC ED 360948.

Verbrugge, William. (1997). *Distance Education via the Internet (Methodology and Results)*. ERIC ED 410939.

APPENDIX:

Tables 1 to 2.E

Table 1

Summary of Successful Grades (A, B, C, Pass) and All Other Grades by Place of Class Location and by Academic Center: Winter Term 1997

Academic Center	Successful Grades: A, B, C, Pass		All Other Grades		p	Results of Chi-Square Analysis
	Campus	Distance	Campus	Distance		
Farquhar Center for Undergraduate Studies	6,687	3,348	1,390	505	.001	Students enrolled in courses offered through distance education received a significantly greater frequency of successful grades than their campus-based counterparts.
Fischler Center for the Advancement of Education	4,906	2,421	605	164	.001	Students enrolled in courses offered through distance education received a significantly greater frequency of successful grades than their campus-based counterparts.
School of Business and Entrepreneurship	1,973	1,807	288	93	.001	Students enrolled in courses offered through distance education received a significantly greater frequency of successful grades than their campus-based counterparts.

Center for Psychological Studies . . .	1,609	499	90	46	.007	There is no difference in the frequency of successful grades awarded between students enrolled in courses offered through distance education and students who are campus-based.
All Four Academic Centers with Both Campus-Based Courses and Distance Education Courses	15,175	8,075	2,373	808	.001	Students enrolled in courses offered through distance education received a significantly greater frequency of successful grades than their campus-based counterparts.

Table 2.A

Summary of Winter Term 1997 Grades by Place of Class Location: Farquhar Center for Undergraduate Studies

	Successful Grades												
	A		B		C		Pass		Subtotal		All Other Grades		Total
Faculty Status	N	%	N	%	N	%	N	%	N	%	N	%	N
Campus-Based Instruction													
Broward County	1,967	31	2,233	35	935	15	114	2	5,249	82	1,180	18	6,429
Miami-Dade County	726	44	544	33	168	10	0	0	1,438	87	210	13	1,648
Subtotal	2,693	33	2,777	34	1,103	14	114	1	6,687	83	1,390	17	8,077
Distance Education													
Subtotal	1,574	41	1,375	36	398	10	1	0	3,348	87	505	13	3,853
TOTAL	4,267	36	4,152	35	1,501	13	115	1	10,035	84	1,895	16	11,930

Null Hypothesis: There is no statistically significant difference between campus-based courses and distance education courses regarding the frequency of successful grades and all other grades awarded ($p \leq .001$).

Finding: Chi-square = 32.86 and the Null Hypothesis is rejected ($p = .001$). Students enrolled in courses offered through the use of distance education received a statistically significantly greater frequency of successful grades than their campus-based counterparts.

17

18

Table 2.B

Summary of Winter Term 1997 Grades by Place of Class Location: Fischler Center for the Advancement of Education

	Successful Grades												
	A		B		C		Pass		Subtotal		All Other Grades		Total
Faculty Status	N	%	N	%	N	%	N	%	N	%	N	%	N
Campus-Based Instruction													
Broward County	2,595	60	948	22	96	2	141	3	3,780	88	526	12	4,306
Miami-Dade County	801	66	256	21	12	1	57	5	1,126	93	79	7	1,205
Subtotal	3,396	62	1,204	22	108	2	198	4	4,906	89	605	11	5,511
Distance Education													
Subtotal	1,462	57	264	10	12	0	683	26	2,421	94	164	6	2,585
TOTAL	4,858	60	1,468	18	120	1	881	11	7,327	91	769	9	8,096

Null Hypothesis: There is no statistically significant difference between campus-based courses and distance education courses regarding the frequency of successful grades and all other grades awarded ($p \leq .001$).

Finding: Chi-square = 43.95 and the Null Hypothesis is rejected ($p = .001$). Students enrolled in courses offered through the use of distance education received a statistically significantly greater frequency of successful grades than their campus-based counterparts.

BEST COPY AVAILABLE

Table 2.C

Summary of Winter Term 1997 Grades by Place of Class Location: School of Business and Entrepreneurship

	Successful Grades												
	A		B		C		Pass		Subtotal		All Other Grades		Total
Faculty Status	N	%	N	%	N	%	N	%	N	%	N	%	N
Campus-Based Instruction													
Broward County	806	41	524	27	72	4	276	14	1,678	86	270	14	1,948
Miami-Dade County	136	43	78	25	6	2	75	24	295	94	18	6	313
Subtotal	942	42	602	27	78	3	351	16	1,973	87	288	13	2,261
Distance Education													
Subtotal	1,018	54	656	35	39	2	94	5	1,807	95	93	5	1,900
TOTAL	1,960	47	1,258	30	117	3	445	11	3,780	91	381	9	4,161

Null Hypothesis: There is no statistically significant difference between campus-based courses and distance education courses regarding the frequency of successful grades and all other grades awarded ($p \leq .001$).

Finding: Chi-square = 76.35 and the Null Hypothesis is rejected ($p = .001$). Students enrolled in courses offered through the use of distance education received a statistically significantly greater frequency of successful grades than their campus-based counterparts.

Table 2.D

Summary of Winter Term 1997 Grades by Place of Class Location: Center for Psychological Studies

	Successful Grades												
	A		B		C		Pass		Subtotal		All Other Grades		Total
Faculty Status	N	%	N	%	N	%	N	%	N	%	N	%	N
Campus-Based Instruction													
Broward County	1,120	69	336	21	18	1	68	4	1,542	95	88	5	1,630
Miami-Dade County	45	65	17	25	5	7	0	0	67	97	2	3	69
Subtotal	1,165	69	353	21	23	1	68	4	1,609	95	90	5	1,699
Distance Education													
Subtotal	359	66	131	24	9	2	0	0	499	92	46	8	545
TOTAL	1,524	68	484	22	32	1	68	3	2,108	94	136	6	2,244

Null Hypothesis: There is no statistically significant difference between campus-based courses and distance education courses regarding the frequency of successful grades and all other grades awarded ($p \leq .001$).

Finding: Chi-square = 7.16 and the Null Hypothesis is accepted ($p = .007$).

BEST COPY AVAILABLE

Table 2.E

Summary of Winter Term 1997 Grades by Place of Class Location: All Academic Centers Using Distance Education Modalities

	Successful Grades												
	A		B		C		Pass		Subtotal		All Other Grades		Total
Faculty Status	N	%	N	%	N	%	N	%	N	%	N	%	N
Campus-Based Instruction													
Broward County	6,488	45	4,041	28	1,121	8	599	4	12,249	86	2,064	14	14,313
Miami-Dade County	1,708	53	895	28	191	6	132	4	2,926	90	309	10	3,235
Subtotal	8,196	47	4,936	28	1,312	7	731	4	15,175	86	2,373	14	17,548
Distance Education													
Subtotal	4,413	50	2,426	27	458	5	778	9	8,075	91	808	9	8,883
TOTAL	12,609	48	7,362	28	1,770	7	1,509	6	23,250	88	3,181	12	26,431

Null Hypothesis: There is no statistically significant difference between campus-based courses and distance education courses regarding the frequency of successful grades and all other grades awarded ($p \leq .001$).

Finding: Chi-square = 109.17 and the Null Hypothesis is rejected ($p = .001$). Students enrolled in courses offered through the use of distance education received a statistically significantly greater frequency of successful grades than their campus-based counterparts.